

CLAIMS

1. A polishing apparatus comprising:
 - a polishing plate provided with an abrasive cloth;
 - a chuck for holding a polishing target material to bring the polishing target material into contact with the abrasive cloth; and
 - a retainer ring arranged in a periphery of the chuck,the polishing target material being polished by the abrasive cloth by a relative motion of the polishing plate and the chuck,
 - characterized in that the retainer ring and the chuck can be independently oscillated.
2. A polishing apparatus comprising:
 - a polishing plate provided with an abrasive cloth;
 - a chuck for holding a polishing target material to bring the polishing target material into contact with the abrasive cloth; and
 - a retainer ring arranged in a periphery of the chuck,the polishing target material being polished by the abrasive cloth by a relative motion of the polishing plate and the chuck,
 - characterized in that the retainer ring can vertically move and oscillate with respect to the chuck.
3. The polishing apparatus according to Claim 1 or 2, characterized in that one or a plurality of clearances to facilitate the oscillation are provided.

4. The polishing apparatus according to any of Claims 1 to 3, characterized in that polishing is implemented while a gap of a fixed range between the chuck and the retainer ring is constantly maintained.

5. The polishing apparatus according to Claim 4, characterized in that the range of the gap is between 0.5mm and 2.0mm.

6. The polishing apparatus according to Claim 4 or 5, characterized in that a distance between a center of the chuck and a center of the polishing target material is no more than 0.5mm.

7. The polishing apparatus according to any of Claims 1 to 6, characterized in that the retainer ring is rotatable with respect to the chuck.

8. A method of wafer polishing in which, in a state in which a polishing liquid is interposed between a polishing target material and an abrasive cloth while the polishing target material held by a chuck is pushed against the abrasive cloth, polishing of the polishing target material is implemented by the abrasive cloth by a relative motion of the chuck and a polishing plate,

characterized in that a retainer ring is provided to be vertically movable in a periphery of the chuck, and a pushing force of the retainer ring against the abrasive cloth is set in accordance with the polishing step.

9. The polishing method according to Claim 8, characterized in that the polishing in a coarse polishing step is implemented in a state in which the abrasive cloth is pushed by the retainer ring, and

the polishing in a final polishing step is implemented in a state in which the retainer ring is retracted from the abrasive cloth.

10. A method of wafer manufacture comprising at least a coarse polishing step and a final polishing step,

characterized in that a polishing head comprising a chuck for holding a polishing target material to bring it into contact with an abrasive cloth and a retainer ring arranged to be vertically movable in a periphery of the chuck is employed and,

the polishing in the coarse polishing step is implemented in a state in which the abrasive cloth is pushed by the retainer ring, and the polishing in the final polishing step is implemented in a state in which the retainer ring is retracted from the abrasive cloth,

to thereby implement the coarse polishing step and the final polishing step using the same polishing head.